

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A method for routing telephone calls over the Internet between an originating gateway and a destination gateway, comprising:

selecting a destination gateway that ~~is capable of routing a~~ routes telephone ~~call~~ calls to a destination telephone;

selecting an optimal route from a plurality of routes, wherein each route includes an originating gateway that sends ~~capable of sending~~ data packets to the selected destination gateway, and wherein the originating gateway on the optimal route comprises a source gateway; and

inserting header data into digital data packets containing a call setup request, wherein the header data ensures that data packets containing a failed call setup request are returned to the source gateway, even when ~~regardless of which gateway acts as the originating gateway~~ is not the source gateway.

2. (Original) The method of claim 1, further comprising making a first call setup attempt by sending the data packets containing the call setup request from the source gateway to the destination gateway.

3. (Currently Amended) The method of claim 2, wherein if the first call setup attempt fails and the data packets containing the call setup request are returned to the source gateway, the method further comprises:

identifying the next-most optimal route;

inserting new header data into the data packets containing the call setup request, wherein the new header data identifies ~~the~~ a different originating gateway connected with the next-most optimal route; and

sending the data packets containing the call setup request to the originating gateway connected with the next-most optimal route.

4. (Original) The method of claim 3, wherein the method further comprises:

stripping off the header data identifying the originating gateway connected with the next-most optimal route from the data packets containing the call setup request; and

making a second call setup attempt by sending the data packets containing the call setup request from the originating gateway connected with the next-most optimal route to the destination gateway, wherein if the second call setup attempt fails, the data packets containing the call setup request will be returned to the source gateway.

5. (Currently Amended) The method of claim 4, wherein if the second call setup attempt fails, the method further comprises:

identifying a third-most optimal route;

inserting new header data into the data packets containing the call setup request, wherein the new header data identifies [[the]] yet another different originating gateway connected with the third-most optimal route;

sending the data packets containing the call setup request to the originating gateway connected with the third-most optimal route;

stripping off the header data identifying the originating gateway connected with the third-most optimal route from the data packets containing the call setup request; and

making a third call setup attempt by sending the data packets containing the call setup request from the originating gateway connected with the ~~third-most~~ third-most optimal route to the destination gateway, wherein if the third call setup attempt fails, the data packets containing the call setup request will be returned to the source gateway.

6. (Original) The method of claim 1, wherein the inserting step comprises inserting header data that identifies an originating gateway, and a path onto the Internet.

7. (Original) The method of claim 6, wherein the inserting step also comprises inserting header data that identifies a destination gateway.

8. (Original) The method of claim 1, wherein the inserting step comprises inserting header data that identifies a source gateway, an interim gateway and a destination gateway.

9. (Original) The method of claim 8, wherein the header data identifying an interim gateway can be stripped off the data packets containing the call setup request by the interim gateway such that the information identifying the source gateway and the destination gateway is left intact.

10. (Original) The method of claim 1, wherein the step of selecting an optimal route from a plurality of routes comprises selecting an originating gateway, and a path onto the Internet.

11. (Original) The method of claim 10, wherein selecting a path onto the Internet comprises selecting an Internet Service Provider.

12. (Original) The method of claim 1, wherein the step of selecting a destination gateway comprises selecting an optimal destination gateway and at least one additional destination gateway from among a plurality of candidate destination gateways.

13. (Original) The method of claim 1, wherein the step of selecting a route comprises selecting an optimal originating gateway an Internet Service Provider, and at least one additional originating gateway and Internet Service Provider.

14. (Original) A system configured to route telephone calls over the Internet, comprising:

a routing controller configured to generate routing information that identifies routes for communicating digital data packets bearing telephone calls over the Internet;

a source gateway configured to receive the routing information and to insert header data into data packets containing a call setup request, wherein the header data is configured to ensure that if a call setup attempt fails, the data packets containing the call setup request will be returned to a source gateway, regardless of which originating gateway placed the data packets onto the Internet.

15. (Original) The system of claim 14, wherein the routing controller is configured to generate routing information that includes an originating gateway and an Internet Service Provider.

16. (Original) The system of claim 14, wherein the routing controller is configured to generate routing information that includes an optimal route, and at least one additional route, and wherein the optimal route includes the source gateway.

17. (Original) The system of claim 14, wherein the system further comprises an interim gateway, and wherein the source gateway is configured to insert header data into the data packets containing the call setup request such that the header data identifies the source gateway,

and the interim gateway, and wherein the source gateway is configured to forward the data packets to the interim gateway.

18. (Original) The system of claim 17, wherein the interim gateway is configured to receive the data packets forwarded by the source gateway, to remove the header data identifying the interim gateway, and to place the data packets onto the Internet.

19. (New) A method for routing telephone calls over the Internet between an originating gateway and a destination gateway, comprising:

- selecting a destination gateway that routes telephone calls to a destination telephone;

- selecting an optimal route from a plurality of routes, wherein each route includes an originating gateway that sends data packets to the selected destination gateway, and wherein the originating gateway on the optimal route comprises a source gateway;

- making a first call setup attempt by sending data packets bearing a call setup request from the source gateway to the destination gateway;

- receiving data packets at the source gateway that were sent from the destination gateway, wherein the received data packets indicate that the first call setup attempted failed;

- adding addressing data to the data packets bearing the call setup request, wherein the addressing data indicates that the call setup request should be sent from a second originating gateway on a next-most optimal route;

forwarding the data packets bearing the call setup request with the addressing data from the source gateway to the second originating gateway; and

making a second call setup attempt by sending the data packets bearing the call setup request from the second originating gateway to the destination gateway.

20. (New) The method of claim 19, further comprising stripping the addressing data out of the data packets bearing the call setup request at the second originating gateway before the second originating gateway makes the second call setup attempt.

21. (New) The method of claim 19, further comprising:

receiving data packets at the second originating gateway that were sent from the destination gateway, wherein the received data packets indicate that the second call setup attempted failed;

adding addressing data to the data packets bearing the call setup request, wherein the addressing data indicates that the call setup request should be sent from a third originating gateway on a third-most optimal route;

forwarding the data packets bearing the call setup request with the addressing data from the second originating gateway to the third originating gateway; and

making a third call setup attempt by sending the data packets bearing the call setup request from the third originating gateway to the destination gateway.

22. (New) The method of claim 21, further comprising stripping the addressing data out of the data packets bearing the call setup request at the third originating gateway before the third originating gateway makes the second call setup attempt.

23. (New) A method for routing telephone calls over the Internet between an originating gateway and a destination gateway, comprising:

selecting a destination gateway that routes telephone calls to a destination telephone;

selecting an optimal route from a plurality of routes, wherein each route includes an originating gateway that sends data packets to the selected destination gateway, and wherein the originating gateway on the optimal route comprises a source gateway;

making a first call setup attempt by sending data packets bearing a call setup request from the source gateway to the destination gateway;

receiving data packets at the source gateway that were sent from the destination gateway, wherein the received data packets indicate that the first call setup attempted failed;

forwarding the data packets bearing the call setup request from the source gateway to a second originating gateway on a next-most optimal route;

immediately making a second call setup attempt by sending the data packets bearing the call setup request from the second originating gateway to the destination gateway if the second originating gateway is on a route that is ranked below a route containing the source

gateway.

24. (New) The method of claim 23, further comprising consulting a routing controller to determine if the second originating gateway is on a route that is ranked below a route containing the source gateway.

25. (New) The method of claim 23, further comprising:
receiving data packets at the second originating gateway that were sent from the destination gateway, wherein the received data packets indicate that the second call setup attempted failed;

forwarding the data packets bearing the call setup request from the second originating gateway to a third originating gateway on a third-most optimal route; and

immediately making a third call setup attempt by sending the data packets bearing the call setup request from the third originating gateway to the destination gateway if the third originating gateway is on a route that is ranked below a route containing the second originating gateway.

26. (New) The method of claim 25, further comprising consulting a routing controller to determine if the third originating gateway is on a route that is ranked below a route containing the second originating gateway.